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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/643,978	08/20/2003	Yoshitaka Aoki	241759US0	4978

22850 7590 03/11/2005

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER
KEEHAN, CHRISTOPHER M
ART UNIT
PAPER NUMBER

1712

DATE MAILED: 03/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/643,978

Applicant(s)

AOKI ET AL.

Examiner

Christopher M. Keehan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/20/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 6-8 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Fick (4,842,911). Regarding claims 1, 7, 8, and 11, Fick discloses a heat conductive composite sheet comprising a heat softening, heat conductive layer containing a silicone resin and a heat conductive filler, and a heat conductive silicone rubber layer containing a heat conductive filler (col.4, lines 16-38 and col.6, line 46-col.7, line 6), and curing as claimed (col.7, lines 49-56 and Figure 3).

Regarding claim 6, Fick discloses wherein the heat conductive silicone rubber layer is a cured product of a radical reaction curable silicone rubber composition containing a heat conductive filler (col.6, lines 55-58).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fick (4,842,911) in view of Ahn et al. (6,482,888 B1). Fick, as applied above, is as set forth and incorporated herein. Fick discloses that various silicones can be used in the interfacing (col.7, line 60-col.8, line 2). Fick does not appear to specifically disclose the instantly claimed silicones. Ahn et al. disclose a heat conductive silicone resin comprising a silicone resin as claimed (col.5, line 50-col.6, line 2), a heat conductive filler col.13, lines 9-23), and using the composition with an electronic device (col.14, lines 32-38). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have substituted the heat conductive silicone of Ahn et al. in the interfacing of Fick et al. because Ahn et al. teach that the silicone composition produces a heat conductive layer that is effectively used in electronic device interfaces, resulting in a higher quality product.

Claims 4, 5, 9, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fick (4,842,911) in view of Anabuki et al. (6,506,828 B1). Fick, as applied above, is as set forth and incorporated herein. Fick discloses a radical reaction curable silicone rubber composition (col.6, lines 55-58). Fick does not appear to specifically disclose an addition and condensation curable silicone rubber composition. Anabuki et al. disclose a heat conductive silicone composition that can be cured by radical, addition, or condensation curing (col.4, line 66-col.5, line 9), thereby equating the methods of curing, containing a heat conductive filler (col.5, lines 20-26), for use in electronic interfacings (col.6, lines 16-24). Therefore, it would have been obvious to

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one of ordinary skill in the art at the time the invention was made to have cured the silicone composition as taught by Anabuki et al. by a method such as addition or condensation curing, depending on the desired reaction method, in the interfacing of Fick because Anabuki et al. teach that a heat conductive silicone layer containing heat conductive filler can be cured by a variety of mechanisms, depending on the desired reaction mechanism, resulting in a higher quality product.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher M. Keehan whose telephone number is (571) 272-1087. The examiner can normally be reached on Monday-Friday, from 6:30 to 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy P. Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Christopher Keehan



March 7, 2005

DAVID J. BUTTNER
PRIMARY EXAMINER

